

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled).

2. (currently amended) A plant for multi-component liquid mixtures processing comprising a feeding pump (2), a head delivery main (3), a discharge main (4), control instrumentation (11, 12, 13, 14, 19) and ~~an evacuator~~ a vacuum-generating device (5) comprising a horizontal vacuum chamber (1), wherein the ~~evacuator~~ vacuum-generating device (5) is ~~embodied~~ implemented as a ~~hydraulic/gas ejector~~ liquid-gas jet device (1, 5, 6, 7, 10) connected to the head main (3), ~~the~~ a nozzle (6) of which is integrated into ~~the~~ a front end wall (7) of the vacuum chamber (1), ~~the latter~~ having ~~the~~ a length with respect to its cavity diameter meeting the equation

$$L = (7 \text{ to } 10) * D, \text{ where:}$$

L is the length of the vacuum chamber,

D is the diameter of the vacuum chamber cavity;

~~besides,~~ the plant further comprises ~~the~~ a counterpressure regulator (8) ~~embodied~~ implemented so as to provide for, jointly with the ~~hydraulic/gas ejector~~ liquid-gas jet device (1, 5, 6, 7,

10), formation of ~~the~~ a pressure surge in the vacuum chamber and connected through a pipeline to ~~the~~ a rear end wall of the vacuum chamber (1), and a vacuum pressure gauge (11) connected to the vacuum chamber (1) in ~~the latter's front section~~ a front section of said vacuum chamber.

3. (currently amended) The plant according to the Claim 2, wherein the nozzle (6) ~~is embodied with its thickness~~ has a length with respect to its diameter constituting

$$\frac{l_c}{d_c} = 1 \text{ to } 5, \text{ where:}$$

l_c is the nozzle ~~thickness~~ length,

d_c is the nozzle diameter.

4. (currently amended) The plant according to Claim 2, wherein additionally connected to the head delivery main (3) between the feeding pump (2) and the ~~exhaust ejector~~ liquid-gas jet device (1, 5, 6, 7, 10) are a flowmeter (12), a thermometer (13), and a pressure gauge (14).

5. (currently amended) The plant according to Claim 3, wherein additionally connected to the head delivery main (3) between the feeding pump (2) and the ~~exhaust ejector~~ liquid-gas jet device

(1, 5, 6, 7, 10) are a flowmeter (12), a thermometer (13), and a pressure gauge (14).

6. (new) A method for processing of multi-component liquid mixtures by vacuum distillation comprising pressure feeding a feed hydrocarbon liquid mixture to a liquid-gas jet device nozzle which discharges into a vacuum chamber of said device, said feed hydrocarbon liquid mixture is fed to said nozzle at a feed pressure of 1 to 12 MPa, wherein due to vaporization of a part of said feed liquid mixture a two-phase supersonic flow is formed in said vacuum chamber, and then a counterpressure is generated which causes a pressure surge in said vacuum chamber with avalanche-like condensation therein of a gaseous component of said two-phase flow, said counterpressure is 0.4 to 0.7 of the magnitude of said feed pressure.

7. (new) The method of claim 6, wherein said feed hydrocarbon liquid mixture is a liquid petroleum mixture.